

# SP-1406

## Description

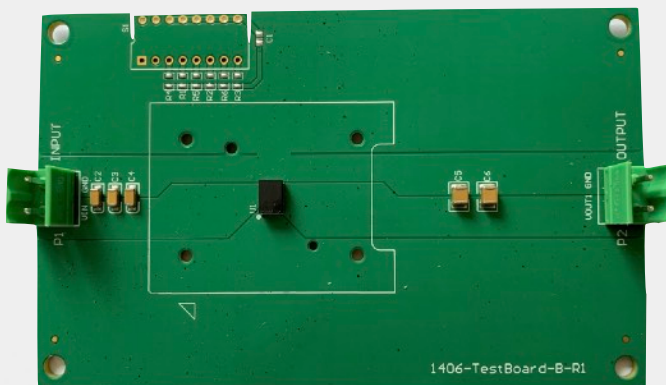
SP-1406, first product of SUNPOL series, is a simple, easy-to-use, fully integrated, high-frequency, compact miniature point-of-load (mPOL) synchronous buck regulator that can achieve 6A continuous output current.

This device has a built-in pulse width modulation (PWM) controller, and integrates MOSFETs and embedded inductors and capacitors. This compact module is suitable for automated assembly using standard surface mount equipment.

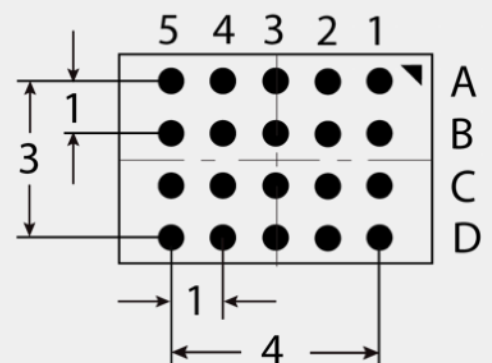
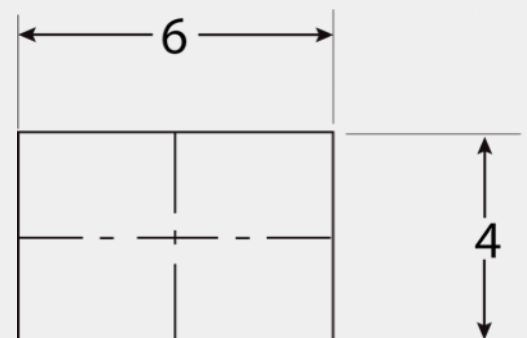
mPOL utilises an optional pulse skipping mode and the low on-resistance ( $R_{DS(on)}$ ) of the internal MOSFET to achieve high efficiency under light load conditions.

The built-in protection functions include soft-start protection, over-voltage protection (OVP), under-voltage protection (UVP), under-voltage lockout (UVLO), cycle-by-cycle over-current protection and thermal shutdown.

- 6 x 4 x 3 mm
- Inductor and MOSFET embedded
- Max. 6A continuous output
- 3-18V input voltage
- 0.6-7V adjustable output voltage
- Built-in soft start
- 1% feedback voltage accuracy
- Pulse Skip mode for high efficiency
- $\leq 5\mu A$  shutdown current
- $-40^{\circ}C$  to  $+125^{\circ}C$  operating temperature range
- Fault protection:
  - Over-voltage (OVP)
  - Under-voltage (UVP)
  - Under-voltage lockout (UVLO)
  - Thermal shutdown



SP-1406 evaluation board



Dimension (mm)